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EXAMINER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 15 July 2009 have been fully considered. Arguments pertaining to the amended claims and new claims are moot in view of the rejections using the newly cited references. Arguments pertaining to the unamended claims are unpersuasive.

Applicant argues that Nickerson does not anticipate claim 80, arguing that Nickerson does not teach an associative mapping of responses to time slices of a stimulus stream, and that Nickerson does not retrieve or play back time slices of the stimulus stream at the end of a recording session. Arguments/Remarks at 10.

As previously noted, Nickerson teaches correlating response data with SMPTE time codes of a video stimulus stream (see col. 8, ll. 3–19). This correlation may be displayed as a response curve 130 (Fig. 9), which "associates" or "maps" a time value on a horizontal axis with a response value on a vertical axis such that each time value on the horizontal axis within a range of captured data is mapped to a single value on the vertical axis, producing an associative mapping. The SMPTE time codes are "time slices" of the video because each time code corresponds to a frame of video (col. 5, ll. 51–53), and thus the time codes define frames or "slices" of the video. This is consistent with Applicant's specification (see pg. 9, ll. 18–20, referring to a time code t1 as a "time slice").

Applicant's further argument that Nickerson does not retrieve or play back time slices of the stimulus stream at the end of a recording session is not relevant, since the claims do not have such a limitation.

Priority

Applicant previously submitted a declaration under 37 CFR 1.131 establishing the actual reduction to practice of the invention as being prior to the Leroy reference's filing date.

However, as previously noted, the evidence does not establish the reduction to practice of all the claimed elements, so Leroy is still prior art for some claims.

Claim 98 describes associating a stimulus object in a video stream by determining whether a stimulus object is present in a particular time slice of the video stream. Figure 1 of the evidence appears to show a person in a video stream, but no evidence is presented that the software can determine whether or not the person is in a particular time slice of the video stream. Claims 99–102 depend on claim 98 and thus lack support in the same manner.

Therefore, Leroy is still prior art for claims 98–102.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 80, 82, 84–86, and 89 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,226,177 (“Nickerson”).

Claim 80. Nickerson teaches an apparatus for analyzing a response to a stimulus (Abstract), the apparatus comprising a stimulus input that receives a stimulus signal representing the stimulus (see Fig. 1; col. 2, ll. 58–68 (video program material is received by the central processor in order to overlay the response data on the video signal); Fig. 9); a response input that receives at least one response signal (col. 2, ll. 58–68; Fig. 9 (illustrating response curve 130)), each response signal being indicative of a response to the stimulus at a time slice of the received stimulus signal (see Fig. 9 (the horizontal axis of the response curve comprises time codes)); and a correlator coupled with the stimulus input and the response input, the correlator correlating digitally stored time slices of the received stimulus signal with each received response signal as a function of time to produce an associative mapping (see Fig. 9 (illustrating a correlation 130, i.e. an associative mapping, between the vertical response axis and the horizontal time axis); col. 8, ll. 3–7 (the time codes are digitally stored by the processor)).

Claim 82. Nickerson further teaches that each digital time slice comprises a frame correlated with a response signal 130, since an SMPTE time code is stored on a per-frame basis.

Claim 84. Nickerson further teaches that the stimulus stream may be recorded (col. 7, ll. 18–24), i.e. delayed in time.

Claim 85. Nickerson teaches displaying the data as it received, i.e., contemporaneous with its creation (col. 8, l. 7-11).

Claim 86. Nickerson teaches that groups of responses may be associated with different variables (see Fig. 10); and that viewers may be disposed at different angles (e.g., in Fig. 1, a male user of response device 12 is disposed at a different angle than a female user of apparatus 14).

Claim 89. Nickerson teaches an analyzer for statistically analyzing the response signals (col. 10, l. 49–56), wherein the analyzer may be used to find selected segments of the stimulus signal, such as a "question 4" segment (Fig. 10).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 70, 71, 73, 74, 79, 81, 83, 92–95, 97, and 103–105 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,226,177 (“Nickerson”) in view of US 5,517,251 (“Rector”).

Claim 70. Nickerson teaches an apparatus for analyzing responses to at least one stimulus stream (visually perceptible display, Abstract) comprising an input for receiving responses from one or more respondents to the at least one stimulus stream (see Abstract, Fig. 1); a correlator including a processor configured to correlate the

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responses with time slices (SMPTE time codes, col. 6, ll. 48–58) of the stimulus stream to generate an associative mapping of the responses and the time slices of the stimulus stream (see Fig. 9 (illustrating a mapping of the correlation of the response signal 130 with video time codes); col. 6, ll. 40–66; col. 8, ll. 4–7); a storage module coupled with the correlator to store the associative mapping including the responses and the time slices of the stimulus stream (col. 6, ll. 40–43); and a user interface operatively coupled with the storage module allowing an operative to search the associative mapping on the basis of analyses of the responses (see col. 10, ll. 49–56 (discussing various statistical analyses that may be performed on the correlated data)).

Although Nickerson stores the time slices (time codes) as digital signals (col. 8, ll. 3–7), Nickerson does not further teach storing the stimulus stream as a digital signal correlated with the associative mapping; rather, it is stored, e.g., on a video tape (col. 7, ll. 18–24). Nor does Nickerson explicitly teach a user interface allowing an operator to retrieve time slices of the stimulus stream for display wherein playback of the time slices of the stimulus stream may be displayed on the user interface.

Rector teaches an apparatus for correlating a video signal with analog response signals (Abstract). The video signal may be stored on a videotape (col. 2, ll. 40–43) and later stored as a digital signal correlated with the response signals (col. 2, ll. 59–61; col. 4, ll. 1–6; col. 7, ll. 7–18). The signals are associatively mapped by time slices such that the signals are synchronized and integrated in a single file (col. 3, ll. 11–17). The apparatus includes a user interface for searching the associative mapping and retrieving

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time slices of the stimulus stream for display, e.g., in order to display video correlating to anomalous response signals (col. 10, ll. 36–43; col. 11, ll. 5–11 & 40–50).

It would have been obvious to apply Rector's teaching of digitizing a video tape and correlating the digitized signal with response signals to the system of Nickerson for the purpose of rapidly and effectively analyzing the correlation between the video signal and the response signals (see Rector, col. 11, ll. 5–11 & 40–50).

Claim 71. Nickerson further teaches a video stimulus signal (col. 7, l. 59-68), which comprises an audio stream.

Claim 73. Nickerson and Rector further teach a multi-channel associative mapping for recording multiple response signals (Nickerson, col. 8, l. 42-55; Rector, Abstract).

Claim 74. Nickerson and Rector further teach storing a multi-channel associate mapping (see claim 73 rejection), thus implying a multi-channel associative cache (a memory, i.e. cache, for storing the multi-channel associative mapping).

Claim 79. Nickerson further teaches that the stimulus stream may be recorded (col. 7, ll. 18–24), i.e. delayed in time.

Claim 81. Nickerson in view of Rector, as combined for the claim 70 rejection, further teaches a multi-channel associative mapping for recording multiple response signals (Nickerson, col. 8, l. 42-55; Rector, Abstract), thus implying a multi-channel associative cache (a memory, i.e. cache, for storing the multi-channel associative mapping).

Claim 83. Nickerson in view of Rector, as combined for the claim 70 rejection, further teaches measuring an environmental condition and associating the measurements with the time slices in the associative mapping (Rector, col. 6, ll. 30–35).

Claim 92. Nickerson in view of Rector, as combined for the claim 70 rejection, further teaches a graphical user interface for selecting which statistical analysis is performed (see Nickerson, col. 8, ll. 56–63).

Claim 93. Nickerson in view of Rector, as combined for the claim 70 rejection, further teaches means for displaying the associative mapping (see Nickerson Fig. 9).

Claim 94. Nickerson in view of Rector, as combined for the claim 70 rejection, further teaches storing the associative mapping so that the associative mapping can be accessed by content (see Rector, col. 11, ll. 5–11 & 40–50).

Claim 95. Nickerson in view of Rector, as combined for the claim 70 rejection, further teaches storing the associative mapping so that the user can randomly select and access content from the storage device (see Rector, col. 11, ll. 5–11 & 40–50).

Claim 97. Nickerson in view of Rector, as combined for the claim 70 rejection, teaches creating an associative mapping as discussed above and further teaches entering search criteria (col. 10, ll. 41–43: e.g. for an anomalous response) and displaying playback of the time slices of the at least one stimulus stream responsive to the search criteria (col. 11, ll. 5–11 & 40–50: rapid access to selected video data), thus implying a prompt for the search.

Claim 103 corresponds to claim 73 and is met as such.

Claim 104. Nickerson in view of Rector further teaches logging locations of stored time slices of the at least one stimulus stream so that the associative mapping directs retrieval of time slices for playback (Rector, col. 11, ll. 5–11 & 40–50).

Claim 105. Nickerson in view of Rector further teaches measuring an environmental condition and associating the measurements with the time slices in the associative mapping (Rector, col. 6, ll. 30–35).

Claims 72 and 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nickerson in view of Rector and US 5,614,940 (“Cobbley”).

Claim 72. Nickerson in view of Rector does not further teach an automatic audio analyzer for analyzing the audio stream to produce text strings that are searchable through the user interface.

Cobbley teaches an apparatus for selectively playing back segments of a video by selecting index information associated with the segments (Abstract). The user may search for text strings to locate the selectable segment (col. 10, ll. 21–38; col. 12, ll. 41–56). The text strings may be generated by an automatic audio analyzer (col. 4, ll. 41–43).

It is obvious to combine known elements according to known methods to yield predictable results. Therefore, it would have been obvious to combine Cobbley’s automatic audio analyzer with the apparatus of Nickerson in view of Rector according to the described method of searching for and selecting video segments using text strings,

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thus yielding predictable results because the apparatus of Nickerson and Rector divides videos into selectable segments (time slices).

Claim 96. Nickerson in view of Rector and Cobbley, as combined for the claim 72 rejection, further teaches searching by video (see Rector, col. 11, ll. 5–11 & 40–50) and audio (col. 10, ll. 21–38; col. 12, ll. 41–56 (searching by text strings); col. 4, ll. 41–43 (text strings are derived from audio)).

Claim 90 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nickerson in view of the provided definition of “interpolation.”

Claim 90. Nickerson teaches performing a statistical analysis on the response signals (col. 10, l. 49–56), but does not explicitly teach that the statistical analysis comprises an interpolation.

The provided definition 3.b. teaches that the “Method of Interpolation” is useful for determining an equation between time and a quantity determined by observations.

Therefore, it would have been obvious to use the described Method of Interpolation for the purpose of finding an equation between the time and the observed response signals, thus allowing for the inference of additional information based on the known information.

Claim 91 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nickerson in view of the provided definition of “extrapolate.”

Claim 91. Nickerson teaches performing a statistical analysis on the response signals (col. 10, l. 49–56), but does not explicitly teach that the statistical analysis comprises an extrapolation.

The provided definition 2.a. teaches that extrapolation is useful for estimating the values of a series outside a range in which some of its values are known.

Therefore, it would have been obvious to use the extrapolation method for the purpose of estimating the values of such series as the response curve 130 (Fig. 9) or the age groups (Fig. 10) outside of the known values in order to infer additional information based upon the known information.

Claims 98–100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nickerson in view of Rector and US 5,812,642 (“Leroy”).

Claim 98. Nickerson in view of Rector does not further teach determining whether an object is present in a time slice and associating the determination with the time slice in the associative mapping.

Leroy teaches a method for analyzing response signals to a promotion stimulus stream (Abstract) wherein the stimulus stream comprises objects such as people (see Fig. 7: "BOB"; and col. 7, ll. 42–60). The method determines which time slices the object is present in (see Fig. 7). The determination is associating with a time slice in an associative mapping of the stimulus stream, the time data, and the response data (see Fig. 7).

It would have been obvious to add Leroy's method for determining when objects are present in the stimulus stream for the purpose of analyzing the response data with respect to a particular object, thus providing more specific information about the response associated with that object (see Leroy, col. 7, ll. 50–52).

Claim 99. Leroy further teaches that the object comprises a person (col. 7, ll. 42–60).

Claim 100. Nickerson further teaches that the stimulus stream is a video (col. 7, l. 59-68), which comprises an audio stream.

Claims 101 and 102 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nickerson in view of Rector, Leroy, and Cobbley.

Claims 101, 102. Nickerson in view of Rector and Leroy does not further teach an automatic audio analyzer for analyzing the audio stream to produce text strings that are searchable through the user interface.

Cobbley teaches an apparatus for selectively playing back segments of a video by selecting index information associated with the segments (Abstract). The user may search for text strings to locate the selectable segment (col. 10, ll. 21–38; col. 12, ll. 41–56). The text strings may be generated by an automatic audio analyzer (col. 4, ll. 41–43).

It is obvious to combine known elements according to known methods to yield predictable results. Therefore, it would have been obvious to combine Cobbley's automatic audio analyzer with the apparatus of Nickerson in view of Rector and Leroy

according to the described method of searching for and selecting video segments using text strings, thus yielding predictable results because the apparatus divides videos into selectable segments (time slices).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bennett Ingvoldstad whose telephone number is (571) 270-3431. The examiner can normally be reached on M–F 9–5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on (571) 272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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